

Jan DELAVAL  
Please!  
Thanks!

Access DB# 85290

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Josephine YOUNG Examiner #: 79813 Date: 11/27/03  
Art Unit: 1623 Phone Number ~~305~~ 605-1201 Serial Number: 091914, 596  
Mail Box and Bldg/Room Location: 8D04 Results Format Preferred (circle): PAPER DISK E-MAIL  
8B19

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: 2'-Substituted RNA preparation

Inventors (please provide full names): REESE, Colin Bernard; et al  
SONG, Quan lei

Earliest Priority Filing Date: 3/19/1999

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Attached: 1) Bib Sheet; 2) Assignment Info; 3) Pending Claim Set

Please search claim 1

(point of novelty: use of  $Al(OR)_3$  as nucleophile to deliver OR)

Thanks!

RECEIVED

JAN 28 2004

STIC

Jan Delaval  
Reference Librarian  
Biotechnology & Chemical Library  
CM1 1E07 - 703-308-4498  
jan.delaval@uspto.gov

### STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>[Signature]</u>	NA Sequence (#) _____	STN <u>/</u>
Searcher Phone #: <u>7498</u>	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>✓</u>	Questel/Orbit _____
Date Searcher Picked Up: <u>2/4/03</u>	Bibliographic _____	Dr. Link _____
Date Completed: <u>2/4/03</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: _____	Fulltext _____	Sequence Systems _____
Clerical Prep Time: <u>20</u>	Patent Family _____	WWW/Internet _____
Online Time: <u>+ 75</u>	Other _____	Other (specify) _____

=> fil reg

FILE 'REGISTRY' ENTERED AT 12:33:15 ON 04 FEB 2003

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 3 FEB 2003 HIGHEST RN 485316-86-7

DICTIONARY FILE UPDATES: 3 FEB 2003 HIGHEST RN 485316-86-7

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

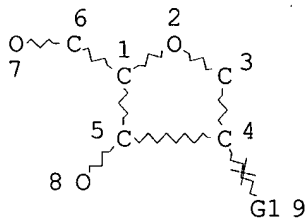
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d sta que 129

L23 STR



VAR G1=O/S/N

NODE ATTRIBUTES:

CONNECT IS M3 RC AT 3

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

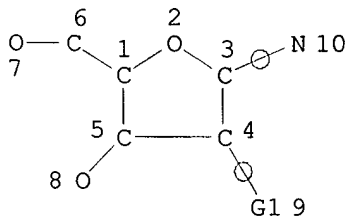
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE

L25 119863 SEA FILE=REGISTRY SSS FUL L23

L27 STR



VAR G1=O/S/N

NODE ATTRIBUTES:

CONNECT IS M3 RC AT 3

DEFAULT MLEVEL IS ATOM

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Biotechnology & Chemical Library  
CM1 1E07 - 703-308-4498  
[ian.delaval@uspto.gov](mailto:ian.delaval@uspto.gov)

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L29 2053 SEA FILE=REGISTRY SUB=L25 SSS FUL L27

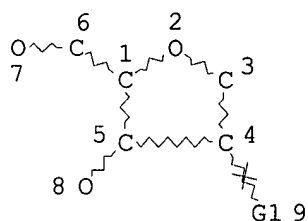
100.0% PROCESSED 2089 ITERATIONS

2053 ANSWERS

SEARCH TIME: 00.00.01

=> d sta que 146

L23 STR



VAR G1=O/S/N

NODE ATTRIBUTES:

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DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

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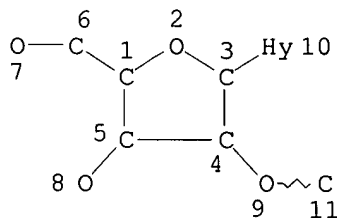
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NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE

L25 119863 SEA FILE=REGISTRY SSS FUL L23

L30 STR



NODE ATTRIBUTES:

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DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M1 N AT 10

GRAPH ATTRIBUTES:

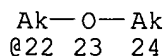
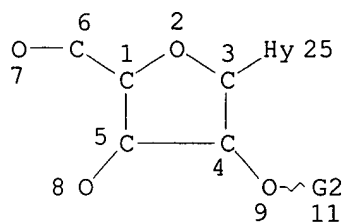
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NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L32 16852 SEA FILE=REGISTRY SUB=L25 SSS FUL L30

L41 STR



VAR G2=AK/22

NODE ATTRIBUTES:

CONNECT IS M1 RC AT 7

CONNECT IS M1 RC AT 8

CONNECT IS M1 RC AT 25

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M1 N AT 25

GRAPH ATTRIBUTES:

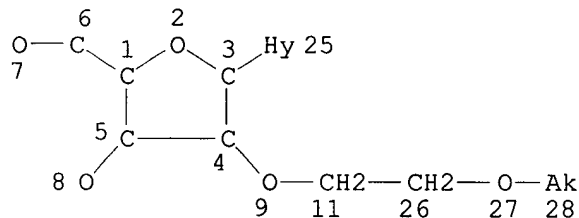
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L42 16852 SEA FILE=REGISTRY SUB=L32 SSS FUL L41

L43 STR



NODE ATTRIBUTES:

CONNECT IS M1 RC AT 7

CONNECT IS M1 RC AT 8

CONNECT IS M1 RC AT 25

CONNECT IS E1 RC AT 28

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M1 N AT 25

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L44 171 SEA FILE=REGISTRY SUB=L42 SSS FUL L43

L45 2 SEA FILE=REGISTRY ABB=ON PLU=ON L44 AND C12H19N3O6

L46 169 SEA FILE=REGISTRY ABB=ON PLU=ON L44 NOT L45

=> d his

(FILE 'HOME' ENTERED AT 10:47:23 ON 04 FEB 2003)  
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 10:47:43 ON 04 FEB 2003  
E WO2000-GB965/AP,PRN

L1 1 S E3,E4  
E GB99-6328/AP, PRN  
L2 1 S E4  
L3 1 S L1,L2  
E REESE C/AU  
L4 107 S E3,E4  
E REESE COLIN/AU  
L5 225 S E3-E5  
E SONG Q/AU  
L6 145 S E3-E14  
E SONG QUAN/AU  
L7 43 S E3,E16,E17  
E AVECIA/PA,CS  
L8 168 S E3-E44  
SEL RN L3

FILE 'REGISTRY' ENTERED AT 10:50:08 ON 04 FEB 2003  
L9 6 S E1-E6

FILE 'HCAPLUS' ENTERED AT 10:51:01 ON 04 FEB 2003  
L10 663 S L4-L8  
L11 1 S L10 AND L3  
L12 662 S L10 NOT L11

FILE 'REGISTRY' ENTERED AT 10:51:17 ON 04 FEB 2003

FILE 'HCAPLUS' ENTERED AT 10:51:20 ON 04 FEB 2003  
SET SMARTSELECT ON  
L13 SEL L12 1- RN : 5130 TERMS  
SET SMARTSELECT OFF

FILE 'REGISTRY' ENTERED AT 10:51:41 ON 04 FEB 2003  
L14 5782 S L13  
L15 71 S L14 AND AL/ELS  
L16 71 S L14 AND ?ALUMIN?/CNS  
L17 71 S L15,L16  
L18 2 S L17 AND (AL OR AL2O3)/MF  
L19 STR  
L20 50 S L19  
L21 STR L19  
L22 50 S L21  
L23 STR L21  
L24 50 S L23  
L25 119863 S L23 FUL  
L26 STR L23  
L27 STR L26  
L28 50 S L27 SAM SUB=L25  
L29 2053 S L27 FUL SUB=L25  
SAV L29 YOUNG914/A  
L30 STR L19  
L31 50 S L30 SAM SUB=L25  
L32 16852 S L30 FUL SUB=L25  
SAV TEMP L32 YOUNG914A/A  
L33 STR L30  
L34 50 S L33 SAM SUB=L32  
L35 31 S L33 CSS SAM SUB=L32  
L36 3283 S L33 FUL SUB=L32  
SAV L36 YOUNG914B/A TEMP  
E AL/ELS  
L37 67894 S E3 AND O/ELS

FILE 'HCAPLUS' ENTERED AT 11:59:29 ON 04 FEB 2003  
L38 1532 S L29

FILE 'REGISTRY' ENTERED AT 12:02:53 ON 04 FEB 2003

L39 STR L33  
L40 50 S L39 SAM SUB=L32  
L41 STR L39  
L42 16852 S L41 FUL SUB=L32  
L43 STR L41  
L44 171 S L43 FUL SUB=L42  
SAV L44 YOUNG914C/A  
L45 2 S L44 AND C12H19N3O6  
L46 169 S L44 NOT L45

FILE 'HCAPLUS' ENTERED AT 12:07:00 ON 04 FEB 2003

L47 4 S L45  
L48 226 S L46  
L49 4 S L38 AND L47  
L50 192 S L38 AND L48  
L51 2 S L49,L50 AND (L18 OR AL OR ALUMIN? OR AL2O3)  
L52 4 S L49,L51  
L53 23 S L38 AND (L18 OR AL OR ALUMIN? OR AL2O3 OR "AL OR 3")  
L54 21 S L38 AND (L18 OR AL OR ALUMIN? OR AL(1W)3)  
L55 2 S L53 NOT L54

FILE 'REGISTRY' ENTERED AT 12:11:09 ON 04 FEB 2003

L56 26592 S L37 AND C/ELS  
L57 86 S L56 AND 3/ELC.SUB  
L58 5104 S L56 AND 4/ELC.SUB  
L59 275 S L58 NOT H/ELS  
L60 4829 S L58 NOT L59  
L61 4915 S L57,L60  
L62 498 S L37 AND UNSPECIFIED

FILE 'HCAPLUS' ENTERED AT 12:16:19 ON 04 FEB 2003

L63 227 S L44,L46  
L64 16503 S L61  
L65 0 S L63 AND L64  
L66 2 S L63 AND (L18 OR AL OR ALUMIN? OR AL(1W)3 OR AL O# 3)  
L67 4 S L52,L66  
L68 470 S L42 AND L38  
L69 0 S L68 AND L64  
L70 5 S L68 AND (L18 OR AL OR ALUMIN? OR AL(1W)3 OR AL O# 3)  
L71 3 S L70 NOT (FOX OR TAYLOR)/AB  
L72 5 S L67,L71  
L73 5 S L11,L72  
L74 2 S L4-L8 AND L73  
L75 5 S L73,L74  
L76 3 S L68 AND L4-L8  
L77 6 S L75,L76

FILE 'REGISTRY' ENTERED AT 12:21:40 ON 04 FEB 2003

L78 STR L33  
L79 25907 S L78 FUL SUB=L25  
L80 25905 S L79 NOT L45  
L81 91 S L46 AND L80  
L82 15 S L81 AND 2/NR  
L83 9 S L82 NOT P/ELS  
L84 5 S L83 AND URID?  
L85 2 S L84 AND (C12H18N2O7 OR C13H20N2O7)  
L86 1 S URIDINE/CN

FILE 'HCAPLUS' ENTERED AT 12:26:09 ON 04 FEB 2003

L87 5931 S L84 OR L86  
L88 308 S L87 AND L38

L89 3 S L88 AND L77  
L90 2 S L88 AND (L64 OR AL OR ALUMIN? OR AL(1W)3 OR AL O# 3)  
L91 6 S L77,L89,L90 AND L1-L8,L10-L12,L38,L47-L55,L63-L77,L87-L90  
L92 21 S L38 AND (AL OR ALUMIN?)  
L93 5 S L92 AND L68  
L94 8 S L91,L93  
L95 2 S L94 NOT L91  
L96 6 S L91 AND L94  
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 12:29:06 ON 04 FEB 2003

L97 33 S E1-E33  
L98 0 S L97 AND AL/ELS  
L99 15 S L97 AND L29

FILE 'HCAPLUS' ENTERED AT 12:30:30 ON 04 FEB 2003

L100 6 S L52 OR L96  
L101 6 S L100 OR L47  
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 12:30:52 ON 04 FEB 2003

L102 33 S E34-E66  
L103 2 S L102 AND L45  
L104 15 S L102 AND L29  
L105 3 S L102 AND L85,L86  
L106 13 S L102 NOT L103-L105

FILE 'REGISTRY' ENTERED AT 12:33:15 ON 04 FEB 2003

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 12:33:51 ON 04 FEB 2003

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FILE COVERS 1907 - 4 Feb 2003 VOL 138 ISS 6

FILE LAST UPDATED: 3 Feb 2003 (20030203/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l101 all hitstr tot

L101 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:696649 HCAPLUS

DN 137:246565

TI Antisense oligonucleotides for treating diseases associated with interleukin-5 signal transduction

IN Dean, Nicholas M.; Karras, James G.; McKay, Robert; Manoharan, Muthiah

PA USA

SO U.S. Pat. Appl. Publ., 77 pp., Cont.-in-part of Appl. No. PCT/US00/07318.

CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM A61K048-00  
 ICS C12Q001-68; C07H021-04  
 NCL 514044000  
 CC 15-5 (Immunochemistry)  
 Section cross-reference(s): 3, 63  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002128216	A1	20020912	US 2001-800629	20010307
	US 6136603	A	20001024	US 1999-280799	19990326
	WO 2000058512	A1	20001005	WO 2000-US7318	20000317
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 1999-280799	A2	19990326		
	WO 2000-US7318	A2	20000317		
AB	Comps. and methods are provided for antisense modulation of interleukin-5 signal transduction. Antisense compds., particularly antisense oligonucleotides, targeted to nucleic acids encoding interleukin-5 and interleukin-5 receptor .alpha. are preferred. Methods of using these compds. for modulation of interleukin-5 signal transduction and for treatment of diseases, particularly eosinophilic syndrome, asthma and other reactive airway diseases, those that assocd. with interleukin-5 signal transduction are also provided.				
ST	antisense oligonucleotide interleukin 5 signal transduction asthma eosinophilic syndrome; airway disease IL5 receptor alpha antisense oligonucleotide phosphorothioate				
IT	Diagnosis (agents; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)				
IT	Animal Animal cell Animal tissue Apoptosis Asthma Human Mammalia Signal transduction, biological (antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)				
IT	RNA RL: BSU (Biological study, unclassified); BIOL (Biological study) (antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)				
IT	Antisense oligonucleotides RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)				
IT	Interleukin 5 Interleukin 5 receptors Nucleic acids				



- RL: BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)
- IT Drug delivery systems  
(carriers; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)
- IT Drug delivery systems  
(colloids; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)
- IT Peptides, biological studies  
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(conjugates, nucleic acid; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)
- IT Test kits  
(diagnostic; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)
- IT Respiratory tract  
(disease; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)
- IT Eosinophil  
(diseases, eosinophilic syndrome; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)
- IT Protein sequences  
(for interleukin-5 and Il-5 receptors of human and mouse)
- IT DNA sequences  
(for interleukin-5 of human and mouse)
- IT cDNA sequences  
(for interleukin-5 receptor .alpha.-subunits of human and mouse)
- IT Peptides, biological studies  
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(fusion peptides, nucleic acid conjugates; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)
- IT Drug delivery systems  
(liqs., dispersions; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)
- IT Carbohydrates, biological studies  
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(moiety; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)
- IT Bond  
(phosphothioates; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)
- IT Drug delivery systems  
(pulmonary; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)
- IT Interleukin 5 receptors

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(sol. .alpha.-chain; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)

IT 458622-84-9 458622-85-0, Interleukin 5 (human gene IL5 precursor)  
458622-86-1 458622-87-2 458622-88-3 458622-89-4  
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(amino acid sequence; antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)

IT 283617-11-8P, ISIS 16999 299995-14-5P, ISIS 16096 299995-15-6P, ISIS 16097 299995-16-7P, ISIS 16098 299995-17-8P, ISIS 16099 299995-18-9P, ISIS 16100 299995-19-0P, ISIS 16101 299995-20-3P, ISIS 16102 299995-21-4P, ISIS 16103 299995-22-5P, ISIS 21750 299995-28-1P, ISIS 21756 299995-32-7P, ISIS 21760 300425-30-3P, ISIS 21847 300425-31-4P, ISIS 21849 300425-32-5P, ISIS 21851 300425-33-6P, ISIS 21853 300425-34-7P, ISIS 21855 300425-35-8P, ISIS 16746 300425-36-9P, ISIS 16747 300425-37-0P, ISIS 16749 300425-38-1P, ISIS 16750 300425-39-2P, ISIS 16752 300425-40-5P, ISIS 16753 300425-41-6P, ISIS 16755 300425-42-7P, ISIS 16756 300425-43-8P, ISIS 16758 300425-44-9P, ISIS 16759 300611-25-0P, ISIS 16975 300611-26-1P, ISIS 16976 300611-27-2P, ISIS 16977 300611-28-3P, ISIS 16978 300611-29-4P, ISIS 16979 300611-30-7P, ISIS 16980 300611-31-8P, ISIS 16981 300611-32-9P, ISIS 16982 300611-33-0P, ISIS 16983 300611-34-1P, ISIS 16984 300611-35-2P, ISIS 16985 300611-36-3P, ISIS 16986 300611-37-4P, ISIS 16987 300611-38-5P, ISIS 16988 300611-39-6P, ISIS 16989 300611-40-9P, ISIS 16990 300611-41-0P, ISIS 16991 300611-42-1P, ISIS 16992 300611-43-2P, ISIS 16993 300611-44-3P, ISIS 16994 300611-45-4P, ISIS 16995 300611-46-5P, ISIS 16996 300611-47-6P, ISIS 16997 300611-48-7P, ISIS 16998 300611-49-8P, ISIS 16071 300611-50-1P, ISIS 16072 300611-51-2P, ISIS 16073 300611-52-3P, ISIS 16074 300611-53-4P, ISIS 16075 300611-54-5P, ISIS 16076 300611-55-6P, ISIS 16077 300611-56-7P, ISIS 16078 300611-57-8P, ISIS 16079 300611-58-9P, ISIS 16080 300611-59-0P, ISIS 16081 300611-60-3P, ISIS 16082 300611-61-4P, ISIS 16083 300611-62-5P, ISIS 16084 300611-63-6P, ISIS 16085 300611-64-7P, ISIS 16086 300611-65-8P, ISIS 16087 300611-66-9P, ISIS 16088 300611-67-0P, ISIS 16089 300611-68-1P, ISIS 16090 300611-69-2P, ISIS 16091 300611-70-5P, ISIS 16092 300611-71-6P, ISIS 16093 300611-72-7P, ISIS 16094 300611-73-8P, ISIS 16095 300611-74-9P, ISIS 16924 300611-75-0P, ISIS 16925 300611-76-1P, ISIS 16926 300611-77-2P, ISIS 16927 300611-78-3P, ISIS 16928 300611-79-4P, ISIS 16929 300611-80-7P, ISIS 16930 300611-81-8P, ISIS 16931 300611-82-9P, ISIS 16932 300611-83-0P, ISIS 16933 300611-84-1P, ISIS 16934 300611-85-2P, ISIS 16935 300611-86-3P, ISIS 16936 300611-87-4P, ISIS 16937 300611-88-5P, ISIS 16938 300611-89-6P, ISIS 16939 300611-90-9P, ISIS 16940 300611-91-0P, ISIS 16941 300611-92-1P, ISIS 16942 300611-93-2P, ISIS 16943 300611-94-3P, ISIS 16944 300611-95-4P, ISIS 16945 300611-96-5P, ISIS 16946 300611-97-6P, ISIS 16947 300611-98-7P, ISIS 16948 300611-99-8P, ISIS 16950 300612-00-4P, ISIS 16951 300612-01-5P, ISIS 18001 300612-02-6P, ISIS 18002 300612-03-7P, ISIS 18003 300612-04-8P, ISIS 18004 300612-05-9P, ISIS 18005 300612-06-0P, ISIS 18006 300612-07-1P, ISIS 18007 300612-08-2P, ISIS 18008 300612-09-3P, ISIS 21848 300612-10-6P, ISIS 21850 300612-11-7P, ISIS 21852 300612-12-8P, ISIS 21854 300612-13-9P, ISIS 16949 300612-14-0P, ISIS 16767 300612-15-1P, ISIS 16768 300612-16-2P, ISIS 16769 300612-17-3P, ISIS 16770 300612-18-4P, ISIS 16771 300612-19-5P, ISIS 16772 300612-20-8P, ISIS 16773 300612-21-9P, ISIS 16774 300612-22-0P, ISIS 16775 300612-23-1P, ISIS 16776 300612-24-2P, ISIS 16777 300612-25-3P, ISIS

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RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)

IT 93-97-0, Benzoic anhydride 108-24-7, Acetic anhydride 109-86-4,  
 2-Methoxyethanol 288-88-0, 1H-1,2,4-Triazole 1463-10-1,  
 5-Methyluridine 5536-17-4, 9-.beta.-D-Arabinofuranosyladenine  
 66304-01-6, Beaucage reagent 102691-36-1 **195253-09-9**

RL: RCT (Reactant); RACT (Reactant or reagent)

(antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)

IT 554-01-8P, 5-Methylcytosine 784-71-4P, 2'-Deoxy-2'-fluorouridine  
 838-07-3P, 5-Methyl-2'-deoxycytidine **3736-77-4P**,  
 2,2'-Anhydro-1-.beta.-D-arabinofuranosyluracil 10212-20-1P,  
 2'-Deoxy-2'-fluorocytidine 21679-12-9DP, 2-Fluorodeoxyadenosine,  
 amidites **22423-26-3P** 78842-13-4P, 2'-Deoxy-2'-fluoroguanosine  
 79896-97-2P, N6-Benzoyl-9-.beta.-D-arabinofuranosyladenine 136834-20-3P  
**163759-49-7P**, 2'-O-Methoxyethyl-5-methyluridine  
**163759-50-0P 163759-94-2P 182495-98-3P**  
**182496-00-0P 182496-01-1P 223777-16-0P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(antisense oligonucleotides for treating interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other reactive airway diseases)

IT 384422-60-0, GenBank D90205 384439-81-0, GenBank X12706 384449-46-1,  
 GenBank X61176 384487-55-2, GenBank M96652 384608-76-8, GenBank U18373  
 391535-37-8, GenBank M96651 392214-92-5, GenBank X06271 459235-20-2,  
 DNA (Mus musculus gene Il-5 plus flanks) 459235-21-3 459235-22-4  
 459235-23-5 459235-24-6

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP

(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (nucleotide sequence; antisense oligonucleotides for treating  
 interleukin-5 signal-assocd. eosinophilic syndrome, asthma and other  
 reactive airway diseases)

IT	459235-43-9	459235-44-0	459235-45-1	459235-46-2	459235-47-3
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	459235-58-6	459235-59-7	459235-60-0	459235-61-1	459235-62-2
	459235-63-3	459235-64-4	459235-65-5	459235-66-6	459235-67-7
	459235-68-8	459235-69-9	459235-70-2	459235-71-3	459235-72-4
	459235-73-5	459235-74-6	459235-75-7	459235-76-8	459235-77-9
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RL: PRP (Properties)

(unclaimed nucleotide sequence; antisense oligonucleotides for treating  
 diseases assocd. with interleukin-5 signal transduction)

IT 195253-09-9

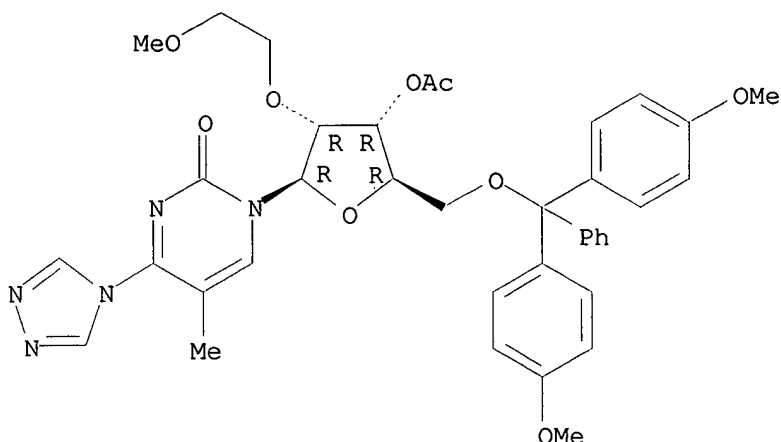
RL: RCT (Reactant); RACT (Reactant or reagent)

(antisense oligonucleotides for treating interleukin-5 signal-assocd.  
 eosinophilic syndrome, asthma and other reactive airway diseases)

RN 195253-09-9 HCAPLUS

CN 2(1H)-Pyrimidinone, 1-[3-O-acetyl-5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-  
 O-(2-methoxyethyl)-.beta.-D-ribofuranosyl]-5-methyl-4-(4H-1,2,4-triazol-4-  
 yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 3736-77-4P, 2,2'-Anhydro-1-.beta.-D-arabinofuranosyluracil  
 22423-26-3P 163759-49-7P, 2'-O-Methoxyethyl-5-  
 methyluridine 163759-50-0P 163759-94-2P  
 182495-98-3P 182496-00-0P 182496-01-1P  
 223777-16-0P

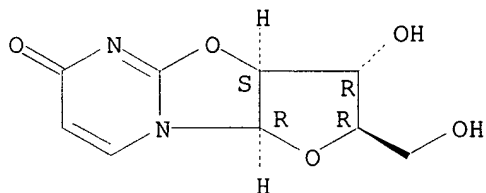
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)

(antisense oligonucleotides for treating interleukin-5 signal-assocd.  
 eosinophilic syndrome, asthma and other reactive airway diseases)

RN 3736-77-4 HCAPLUS

CN 6H-Furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-6-one, 2,3,3a,9a-tetrahydro-3-  
 hydroxy-2-(hydroxymethyl)-, (2R,3R,3aS,9aR)- (9CI) (CA INDEX NAME)

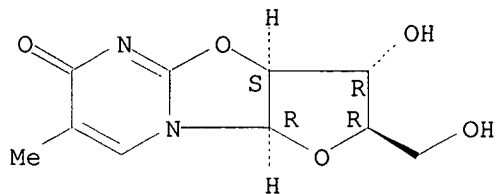
Absolute stereochemistry.



RN 22423-26-3 HCAPLUS

CN 6H-Furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-6-one, 2,3,3a,9a-tetrahydro-3-  
 hydroxy-2-(hydroxymethyl)-7-methyl-, (2R,3R,3aS,9aR)- (9CI) (CA INDEX  
 NAME)

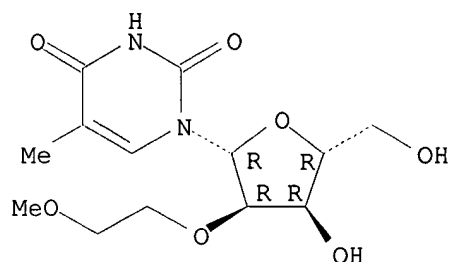
Absolute stereochemistry.



RN 163759-49-7 HCAPLUS

CN Uridine, 2'-O-(2-methoxyethyl)-5-methyl- (9CI) (CA INDEX NAME)

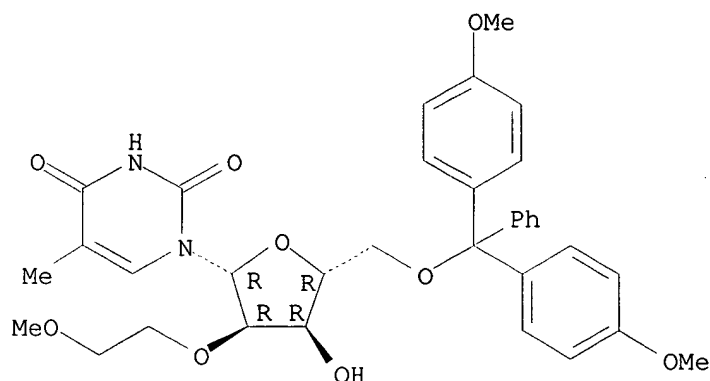
Absolute stereochemistry.



RN 163759-50-0 HCAPLUS

CN Uridine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-(2-methoxyethyl)-5-methyl- (9CI) (CA INDEX NAME)

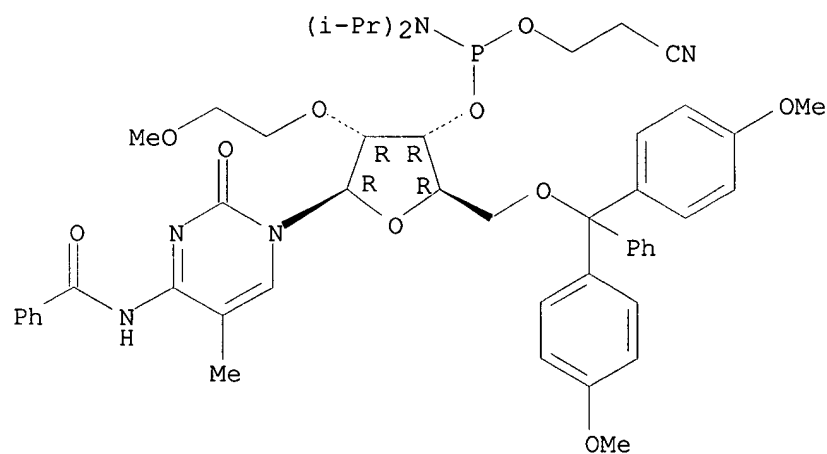
Absolute stereochemistry.



RN 163759-94-2 HCAPLUS

CN Cytidine, N-benzoyl-5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-(2-methoxyethyl)-5-methyl-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

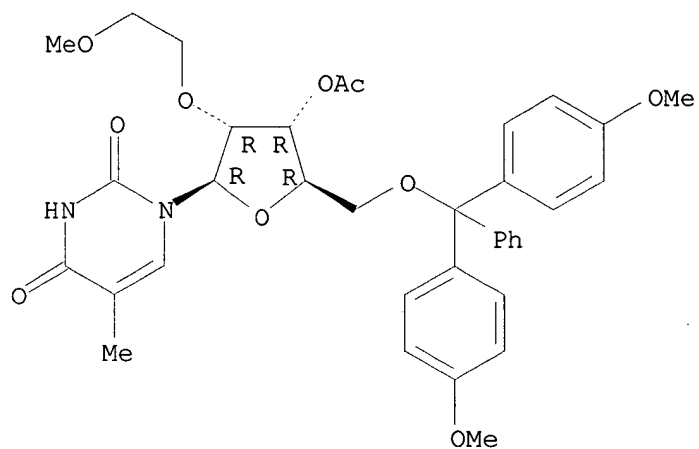
Absolute stereochemistry.



RN 182495-98-3 HCAPLUS

CN Uridine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-(2-methoxyethyl)-5-methyl-, 3'-acetate (9CI) (CA INDEX NAME)

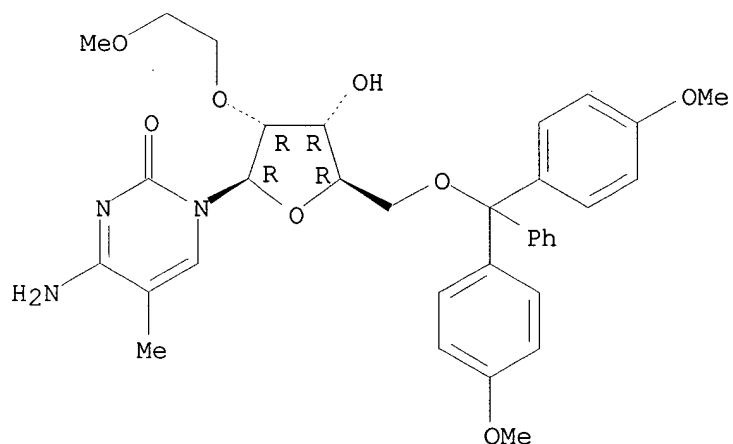
Absolute stereochemistry.



RN 182496-00-0 HCAPLUS

CN Cytidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-(2-methoxyethyl)-5-methyl- (9CI) (CA INDEX NAME)

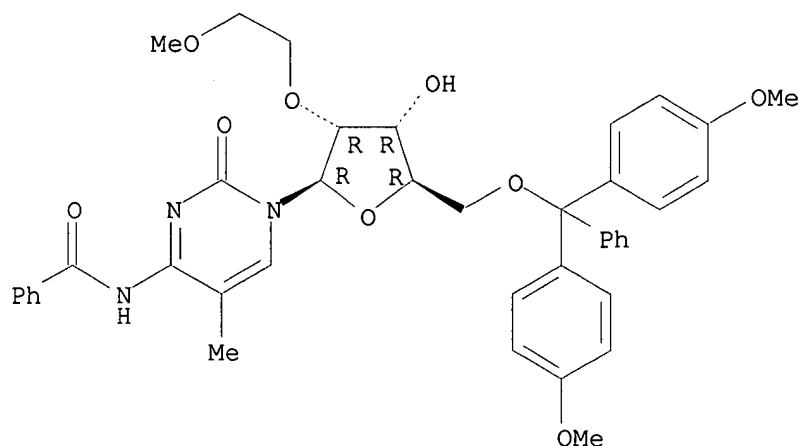
Absolute stereochemistry.



RN 182496-01-1 HCAPLUS

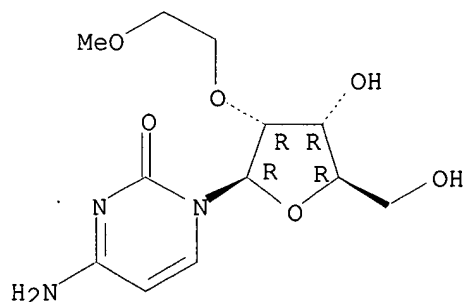
CN Cytidine, N-benzoyl-5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-(2-methoxyethyl)-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 223777-16-0 HCAPLUS  
 CN Cytidine, 2'-O-(2-methoxyethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L101 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:72111 HCAPLUS

DN 136:102622

TI Processes for the preparation of 2,2'-anhydronucleic acid compound derivatives

IN Suzuki, Tsuneji; Nagase, Hiroshi; Kai, Akiyoshi; Iizuka, Hajime

PA Mitsui Chemicals, Inc., Japan

SO PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

IC ICM C07H019-067

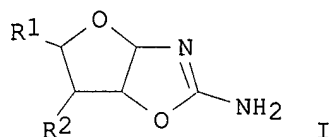
ICS C07D498-14

CC 33-9 (Carbohydrates)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	JP 2002167388	A2	20020611	JP 2001-220077	20010719
PRAI	JP 2000-219546	A	20000719		
OS	CASREACT 136:102622; MARPAT 136:102622				
GI					





AB 2,2'-Anhydronucleic acid compd. derivs. useful as intermediates of drugs or agricultural chems. or the like can be prepd. from inexpensive starting compds. by reacting compd. I with compd. R3CXYZR4 (wherein R1, R2, R3, R4, Q, X, Y and Z represent specific groups resp.). Further, L-cytidine derivs. useful as intermediates of drugs or agricultural chems. or the like can be prepd. by synthesizing a 2'-alkoxycytidine directly from a 2,2'-anhydrocytidine deriv.

ST anhydronucleic acid deriv prepn

IT Nucleic acids

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(anhydro; prepn. of 2,2'-anhydronucleic acid derivs.)

IT 389575-06-8P

RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of 2,2'-anhydronucleic acid derivs.)

IT 389575-08-0P 389575-10-4P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(prepn. of 2,2'-anhydronucleic acid derivs.)

IT 109-86-4, 2-Methoxyethanol 109-88-6, Magnesium methoxide 4554-16-9, 2,3-Dibromopropionitrile 389575-03-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of 2,2'-anhydronucleic acid derivs.)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Research Corporation; US 4104461 A 1978 HCAPLUS
- (2) University Of Georgia Research Foundation Inc; JP 09508394 A 1995
- (3) University Of Georgia Research Foundation Inc; CN 1143966 A 1995 HCAPLUS
- (4) University Of Georgia Research Foundation Inc; RO 116623 B1 1995 HCAPLUS
- (5) University Of Georgia Research Foundation Inc; CA 2182273 A 1995 HCAPLUS
- (6) University Of Georgia Research Foundation Inc; US 5565438 A 1995 HCAPLUS
- (7) University Of Georgia Research Foundation Inc; US 5567688 A 1995 HCAPLUS
- (8) University Of Georgia Research Foundation Inc; US 5587362 A 1995 HCAPLUS
- (9) University Of Georgia Research Foundation Inc; US 5808040 A 1995 HCAPLUS
- (10) University Of Georgia Research Foundation Inc; EP 748330 A1 1995 HCAPLUS
- (11) University Of Georgia Research Foundation Inc; HU 75514 A2 1995 HCAPLUS
- (12) University Of Georgia Research Foundation Inc; BR 9506596 A 1995 HCAPLUS
- (13) University Of Georgia Research Foundation Inc; AU 9517376 A1 1995 HCAPLUS
- (14) University Of Georgia Research Foundation Inc; WO 9520595 A1 1995 HCAPLUS
- (15) University Of Georgia Research Foundation Inc; FI 9602986 A 1995 HCAPLUS
- (16) University Of Georgia Research Foundation Inc; NO 9603138 A 1995 HCAPLUS

IT 389575-06-8P

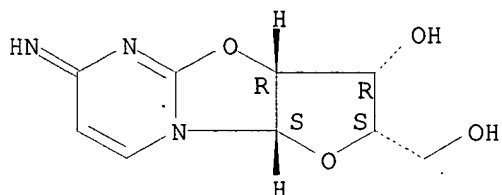
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of 2,2'-anhydronucleic acid derivs.)

RN 389575-06-8 HCAPLUS

CN 6H-Furo[2',3':4,5]oxazolo[3,2-a]pyrimidine-2-methanol, 2,3,3a,9a-tetrahydro-3-hydroxy-6-imino-, monohydrobromide, (2S,3R,3aR,9aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HBr

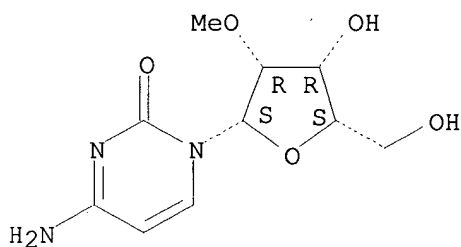
IT 389575-08-0P 389575-10-4P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of 2,2'-anhydronucleic acid derivs.)

RN 389575-08-0 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-(2-O-methyl-.beta.-L-lyxofuranosyl)-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

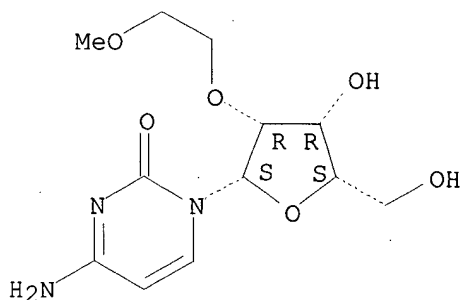


● HCl

RN 389575-10-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-[2-O-(2-methoxyethyl)-.beta.-L-lyxofuranosyl]-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

IT 389575-03-5

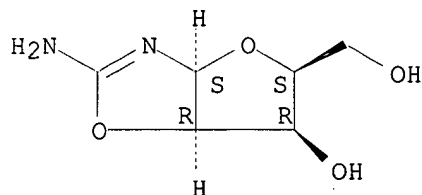
RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of 2,2'-anhydronucleic acid derivs.)

RN 389575-03-5 HCAPLUS

CN Furo[2,3-d]oxazole-5-methanol, 2-amino-3a,5,6,6a-tetrahydro-6-hydroxy-,  
(3aS,5S,6R,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L101 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2003 ACS

AN 2000:688247 HCAPLUS

DN 133:222975

TI '2'-Substituted RNA preparation

IN Reese, Colin Bernard; Song, Quanlai

PA Avecia Limited, UK

SO PCT Int. Appl., 15 pp.

CODEN: PIXXD2

DT Patent

LA English

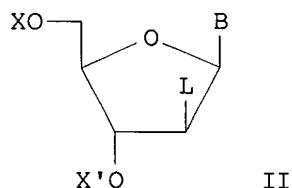
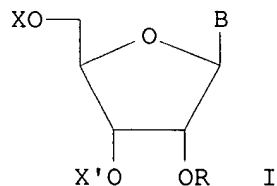
IC ICM C07H019-04

ICS C07H019-06; C07H021-00

CC 33-9 (Carbohydrates)

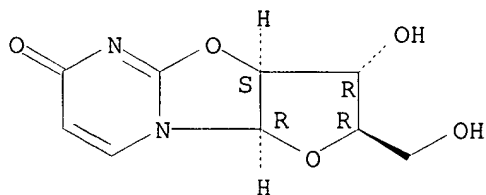
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000056747	A1	20000928	WO 2000-GB965	20000315 <--
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1165584	A1	20020102	EP 2000-909534	20000315 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002540117	T2	20021126	JP 2000-606608	20000315 <--
PRAI GB 1999-6328	A	19990319 <--		
WO 2000-GB965	W	20000315 <--		
OS CASREACT 133:222975; MARPAT 133:222975				
GI				



- AB A process for the prepn. of RNA I wherein X, and X' are each independently H or a protecting group, B is a base; R is an alkyl, alkoxyalkyl, alkenyl, or alkynyl group, is provided, which comprises the reaction a compd. of formula II with a compd. of formula **Al(OR)3** wherein R is as defined above, under substantially anhyd. conditions and L is a leaving group. Thus, 2'-O-(2-methoxyethyl)cytidine was prepd. from uridine via etherification with **aluminum** and 2-methoxyethanol.
- ST RNA methoxyethylcytidine etherification methoxyethanol prepn
- IT Etherification  
(prepn. of 2'-substituted RNA via etherification)
- IT **3736-77-4P 223777-15-9P**  
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. of 2'-substituted RNA via etherification)
- IT **223777-16-0P**  
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of 2'-substituted RNA via etherification)
- IT **58-96-8**, Uridine 102-09-0, Diphenyl carbonate 109-86-4, 2-Methoxyethanol.  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of 2'-substituted RNA via etherification)
- RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
- RE
- (1) Isis Pharmaceuticals Inc; WO 9627606 A 1996 HCAPLUS
- (2) McGee, D; NUCLEOSIDES & NUCLEOTIDES 1996, V15(11/12), P1797
- (3) Ross, B; NUCLEOSIDES & NUCLEOTIDES 1997, V16(7-9), P1641 HCAPLUS
- IT **3736-77-4P 223777-15-9P**  
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. of 2'-substituted RNA via etherification)
- RN 3736-77-4 HCAPLUS
- CN 6H-Furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-6-one, 2,3,3a,9a-tetrahydro-3-hydroxy-2-(hydroxymethyl)-, (2R,3R,3aS,9aR)- (9CI) (CA INDEX NAME)

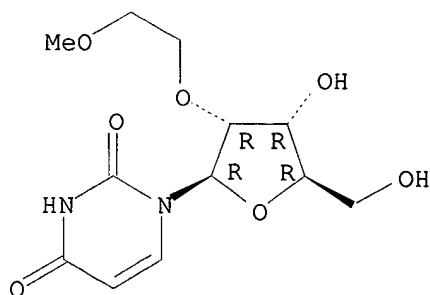
Absolute stereochemistry.



RN 223777-15-9 HCAPLUS

CN Uridine, 2'-O-(2-methoxyethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 223777-16-0P

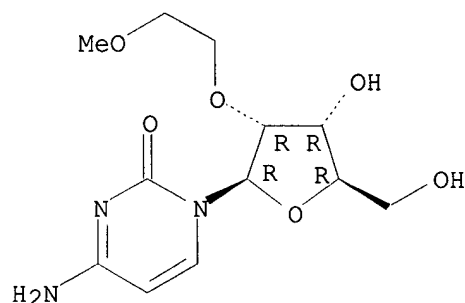
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(prepn. of 2'-substituted RNA via etherification)

RN 223777-16-0 HCAPLUS

CN Cytidine, 2'-O-(2-methoxyethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 58-96-8, Uridine

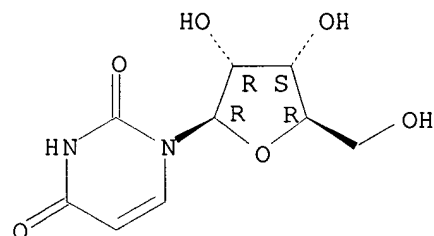
RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of 2'-substituted RNA via etherification)

RN 58-96-8 HCAPLUS

CN Uridine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L101 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2003 ACS

AN 1999:296184 HCAPLUS

DN 130:325337

TI Conversion of uridine into 2'-O(2-methoxyethyl)uridine and 2'-O-(2-methoxyethyl)cytidine

AU Legorburu, Urtzi; Reese, Colin B.; Song, Quanlai

CS Department of Chemistry, King's College London, London, WC2R 2LS, UK

SO Tetrahedron (1999), 55(17), 5635-5640

CODEN: TETRAB; ISSN: 0040-4020

PB Elsevier Science Ltd.

DT Journal

LA English

CC 33-9 (Carbohydrates)

AB Reaction between aluminum 2-methoxyethoxide and 2,2'-anhydro-1-.beta.-D-arabinofuranosyluracil gives 2'-O-(2-methoxyethyl)uridine in high yield. This compd. is converted into 2'-O-(2-methoxyethyl)cytidine in good yield.

ST methoxyethyl uridine prepn conversion cytidine

IT 58-96-8, Uridine

RL: RCT (Reactant); RACT (Reactant or reagent)

(conversion of uridine into methoxyethyluridine and methoxyethylcytidine)

IT 3736-77-4P 223777-15-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(conversion of uridine into methoxyethyluridine and methoxyethylcytidine)

IT 223777-16-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

(conversion of uridine into methoxyethyluridine and methoxyethylcytidine)

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Altmann, K; Nucleosides and Nucleotides 1997, V16, P917 HCAPLUS
- (2) Andrade, M; Nucleosides and Nucleotides 1997, V16, P1617 HCAPLUS
- (3) Divakar, K; J Chem Soc Perkin Trans 1 1982, P1171 HCAPLUS
- (4) Divakar, K; J Chem Soc Perkin Trans 1 1982, P1625 HCAPLUS
- (5) Fathi, R; Tetrahedron Lett 1990, V31, P319 HCAPLUS
- (6) Groetli, M; Tetrahedron 1998, V54, P5899
- (7) Gura, T; Science 1995, V270, P575 HCAPLUS
- (8) Hampton, A; Biochemistry 1966, V5, P2076 HCAPLUS
- (9) Martin, P; Helv Chim Acta 1995, V78, P486 HCAPLUS
- (10) McGee, D; Abstracts of American Chemical Society National Meeting Division of Organic Chemistry 1996
- (11) Miah, A; J Chem Soc Chem Commun 1997, P407 HCAPLUS
- (12) Miah, A; J Chem Soc Perkin Trans 1 1998, P3277 HCAPLUS
- (13) Miah, A; Nucleosides and Nucleotides 1997, V16, P53 HCAPLUS
- (14) Reese, C; J Chem Soc Perkin Trans 1 1984, P1263 HCAPLUS
- (15) Ross, B; Nucleosides and Nucleotides 1997, V16, P1641 HCAPLUS
- (16) Sproat, B; Methods in Molecular Biology Protocols for Oligonucleotides and Analogs 1993, V20, P115 HCAPLUS
- (17) Verheyden, J; J Org Chem 1971, V36, P250 MEDLINE
- (18) Zon, G; Oligonucleotides and Analogues A Practical Approach 1991, P87 HCAPLUS

IT 58-96-8, Uridine

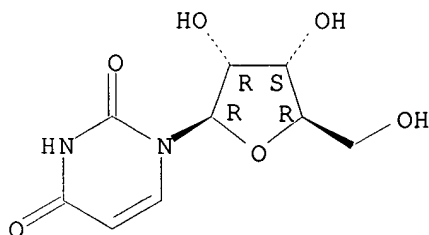
RL: RCT (Reactant); RACT (Reactant or reagent)

(conversion of uridine into methoxyethyluridine and methoxyethylcytidine)

RN 58-96-8 HCAPLUS

CN Uridine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 3736-77-4P 223777-15-9P

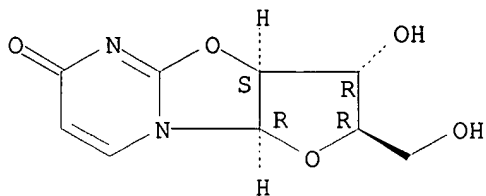
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(conversion of uridine into methoxyethyluridine and methoxyethylcytidine)

RN 3736-77-4 HCAPLUS

CN 6H-Furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-6-one, 2,3,3a,9a-tetrahydro-3-hydroxy-2-(hydroxymethyl)-, (2R,3R,3aS,9aR)- (9CI) (CA INDEX NAME)

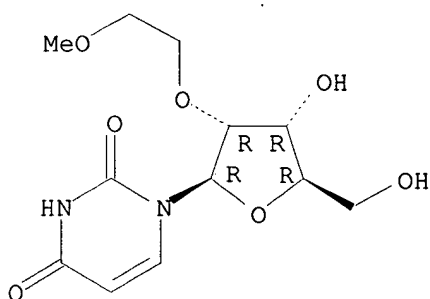
Absolute stereochemistry.



RN 223777-15-9 HCAPLUS

CN Uridine, 2'-O-(2-methoxyethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



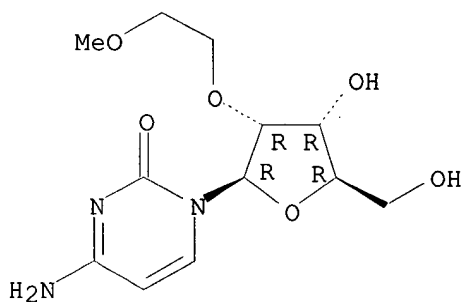
IT 223777-16-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(conversion of uridine into methoxyethyluridine and  
methoxyethylcytidine)

RN 223777-16-0 HCAPLUS

CN Cytidine, 2'-O-(2-methoxyethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L101 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2003 ACS

AN 1996:205035 HCAPLUS

DN 124:261622

TI Preparation of known and novel 2'-modified nucleosides by intramolecular  
nucleophilic displacement of anhydronucleosides.

IN McGee, Danny P. C.; Pieken, Wolfgang A.; Sebesta, David P.; Zhai, Yansheng

PA Nexstar Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 73 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K031-00  
ICS C07H001-00; C07H019-00; C07H021-00  
CC 33-9 (Carbohydrates)  
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9535102	A1	19951228	WO 1995-US6641	19950525
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2192950	AA	19951228	CA 1995-2192950	19950525
	AU 9526496	A1	19960115	AU 1995-26496	19950525
	AU 710074	B2	19990916		
	EP 767657	A1	19970416	EP 1995-921408	19950525
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10501809	T2	19980217	JP 1995-502200	19950525
	US 6090932	A	20000718	US 1996-732283	19961030
PRAI	US 1994-264029	A	19940622		
	WO 1995-US6641	W	19950525		
OS	MARPAT 124:261622				
GI					

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB 2'-Modified nucleosides were prepd. by (1) performing an intramol. nucleophilic reaction on an intermediate [I; B = nucleobase; W = O, S, C(R2)2, NR2, PR2, POR2; X = O, S, NH, NR4; Y = metal, C, Si, Se, S, B, Al, Sn, P; Z = imidazolyl, Cl, F, H, 2H, 3H, OH, NHOR1, NHOR5, NHNR5, NHR5, :NH, CHCN, CHCl2, SH, SR5, CHF2, CF2H, OR4, etc.; R1 = H, protecting group; R2 = O, S, H, OH, CCl3, CF3, halo, (substituted) alkyl, alkenyl, aryl, acyl, PhCO, OR4, esters; R3 = O, S, OH, H, CCl3, halo, alkyl, alkenyl, aryl, PhCO, esters, OR4, null, cyclopentadienyl, cyclooctadienyl, CO, trialkylphosphine if Y = metal; R4 = (substituted) alkenyl, alkynyl, aryl, heterocyclyl, nucleoside, carbohydrate, fluorescent label, phosphate residue; R5 = R2, R4, CN, CONH2, CSNH2, SO2R4, amino acid, peptide residues and mixts. thereof], and (2) isolating the product. Thus, 5'-dimethoxytrityl-2,2'-anhydrouridine (II) was heated with Cl3CCN and NaH at 90.degree. for 16 h to give oxazoline deriv. (III), which was stirred with 80% aq. HOAc to give aminoalc. (IV).

ST nucleoside prepn; anhydronucleoside nucleophilic displacement reaction

IT Nucleosides, preparation  
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. of known and novel 2'-modified nucleosides by intramol. nucleophilic displacement)

IT Nucleosides, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(anhydro, prepn. of known and novel 2'-modified nucleosides by intramol. nucleophilic displacement)

IT Nucleotides, preparation  
RL: PNU (Preparation, unclassified); PREP (Preparation)  
(oligo-, prepn. of known and novel 2'-modified nucleosides by intramol. nucleophilic displacement)

IT 174221-82-OP 175013-47-5P 175013-58-8P  
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)



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IT 23669-79-6P 26889-39-4P 35837-20-8P 103285-22-9P

143463-62-1P 160527-06-0P 174221-81-9P

174221-86-4P      175013-48-6P      175013-49-7P      175013-50-0P      175013-52-2P

175013-53-3P      175013-61-3P      175013-63-5P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

```
(prepn. of known and novel 2'-modified nucleosides by intramol.
nucleophilic displacement)
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IT 107-18-6, Allyl alcohol, reactions 109-88-6, Magnesium methoxide

3736-77-4 35754-82-6, Magnesium propoxide

RL: RCT (Reactant); RACT (Reactant or reagent)

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(prepn. of known and novel 2'-modified nucleosides by intramol.
nucleophilic displacement)
```

IT 957-75-5P 7789-78-8P, Calcium hydride 173170-12-2P

175013-46-4P 175013-51-1P 175013-54-4P

175013-57-7P 175013-60-2P 175013-62-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

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IT 175013-55-5P 175013-56-6P 175013-59-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

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IT 175013-47-5P

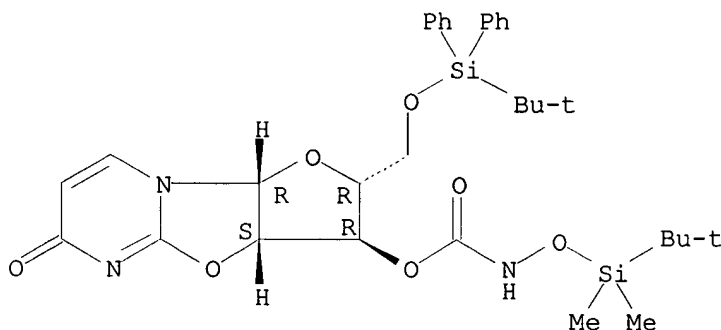
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of known and novel 2'-modified nucleosides by intramol. nucleophilic displacement)

RN 175013-47-5 HCAPLUS

CN Carbamic acid, [[[1,1-dimethylethyl)dimethylsilyl]oxy]-,  
(2R,3R,3aS,9aR)-2-[[[(1,1-dimethylethyl)diphenylsilyl]oxy]methyl]-  
2,3,3a,9a-tetrahydro-6-oxo-6H-furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-3-yl  
ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 35837-20-8P 103285-22-9P 143463-62-1P

160527-06-0P 174221-81-9P

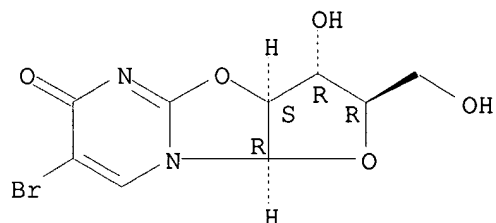
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

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(prepn. of known and novel 2'-modified nucleosides by intramol.
nucleophilic displacement)
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RN 35837-20-8 HCAPLUS

CN 6H-Furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-6-one, 7-bromo-2,3,3a,9a-tetrahydro-3-hydroxy-2-(hydroxymethyl)-, (2R,3R,3aS,9aR)- (9CI) (CA INDEX NAME)

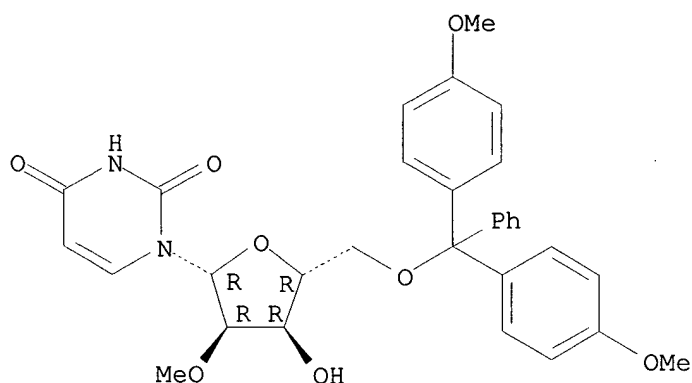
Absolute stereochemistry.



RN 103285-22-9 HCAPLUS

CN Uridine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-methyl- (9CI) (CA INDEX NAME)

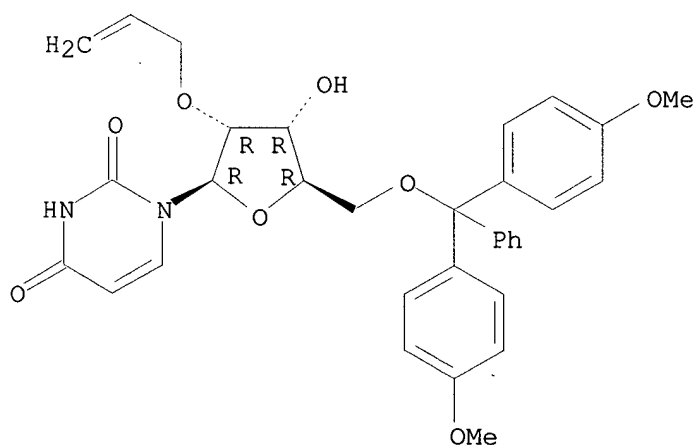
Absolute stereochemistry.



RN 143463-62-1 HCAPLUS

CN Uridine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-2-propenyl- (9CI) (CA INDEX NAME)

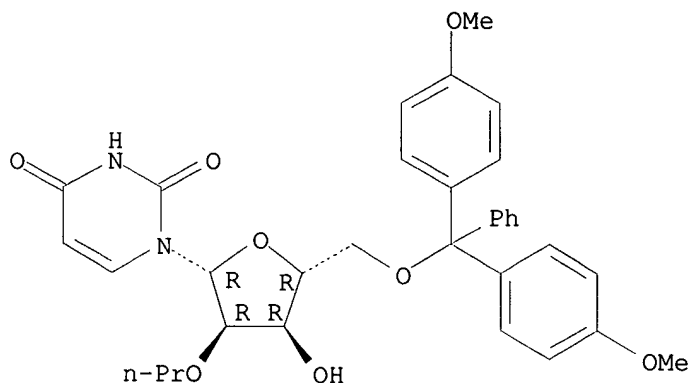
Absolute stereochemistry.



RN 160527-06-0 HCAPLUS

CN Uridine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-propyl- (9CI) (CA INDEX NAME)

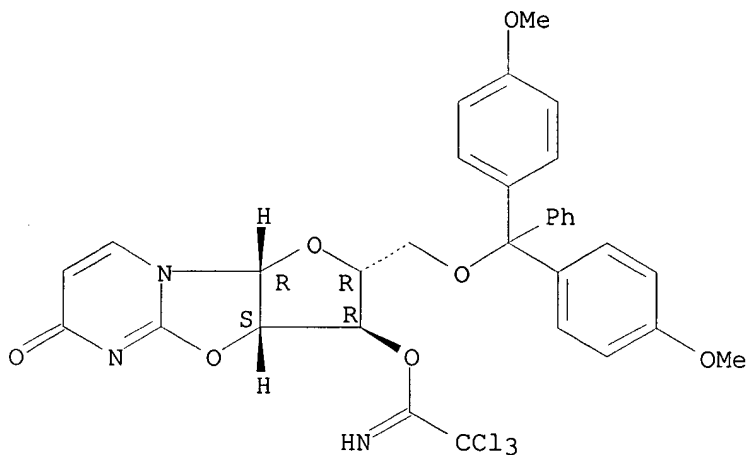
Absolute stereochemistry.



RN 174221-81-9 HCAPLUS

CN Ethanimidic acid, 2,2,2-trichloro-, (2R,3R,3aS,9aR)-2-[[bis(4-methoxyphenyl)phenylmethoxy)methyl]-2,3,3a,9a-tetrahydro-6-oxo-6H-furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-3-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



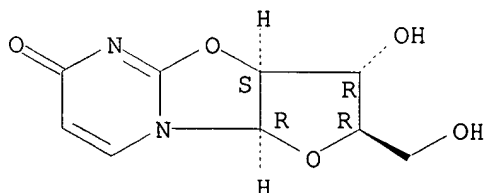
IT 3736-77-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of known and novel 2'-modified nucleosides by intramol.  
nucleophilic displacement)

RN 3736-77-4 HCAPLUS

CN 6H-Furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-6-one, 2,3,3a,9a-tetrahydro-3-hydroxy-2-(hydroxymethyl)-, (2R,3R,3aS,9aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 173170-12-2P 175013-46-4P 175013-51-1P

**175013-57-7P 175013-60-2P 175013-62-4P**

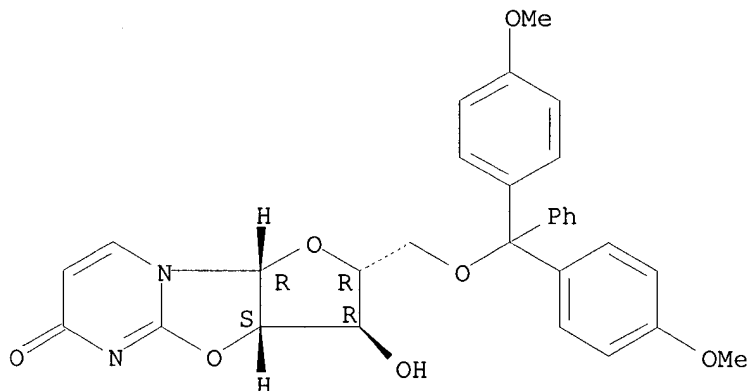
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of known and novel 2'-modified nucleosides by intramol. nucleophilic displacement)

RN 173170-12-2 HCAPLUS

CN 6H-Furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-6-one, 2-[[bis(4-methoxyphenyl)phenylmethoxy)methyl]-2,3,3a,9a-tetrahydro-3-hydroxy-, (2R,3R,3aS,9aR)- (9CI) (CA INDEX NAME)

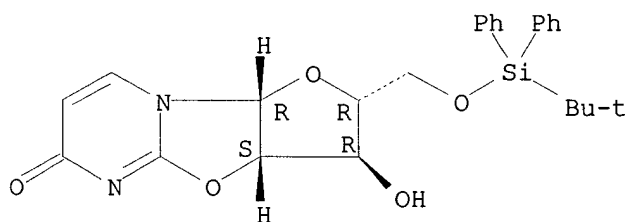
Absolute stereochemistry.



RN 175013-46-4 HCAPLUS

CN 6H-Furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-6-one, 2-[[[(1,1-dimethylethyl)diphenylsilyl]oxy)methyl]-2,3,3a,9a-tetrahydro-3-hydroxy-, (2R,3R,3aS,9aR)- (9CI) (CA INDEX NAME)

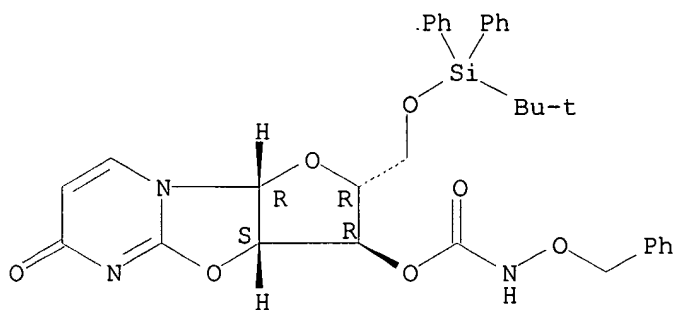
Absolute stereochemistry.



RN 175013-51-1 HCAPLUS

CN Carbamic acid, (phenylmethoxy)-, (2R,3R,3aS,9aR)-2-[[[(1,1-dimethylethyl)diphenylsilyl]oxy)methyl]-2,3,3a,9a-tetrahydro-6-oxo-6H-furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-3-yl ester (9CI) (CA INDEX NAME)

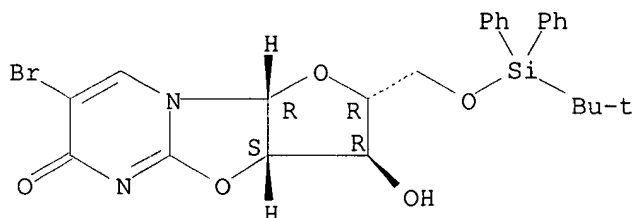
Absolute stereochemistry.



RN 175013-57-7 HCAPLUS

CN 6H-Furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-6-one, 7-bromo-2-[[[(1,1-dimethylethyl)diphenylsilyl]oxy]methyl]-2,3,3a,9a-tetrahydro-3-hydroxy-, (2R,3R,3aS,9aR) - (9CI) (CA INDEX NAME)

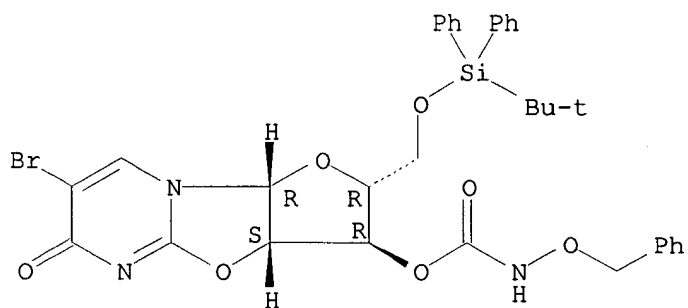
Absolute stereochemistry.



RN 175013-60-2 HCAPLUS

CN Carbamic acid, (phenylmethoxy)-, (2R,3R,3aS,9aR)-7-bromo-2-[[[(1,1-dimethylethyl)diphenylsilyl]oxy]methyl]-2,3,3a,9a-tetrahydro-6-oxo-6H-furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-3-yl ester (9CI) (CA INDEX NAME)

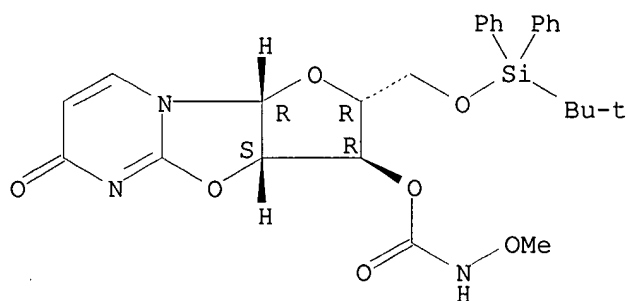
Absolute stereochemistry.



RN 175013-62-4 HCAPLUS

CN Carbamic acid, methoxy-, (2R,3R,3aS,9aR)-2-[[[(1,1-dimethylethyl)diphenylsilyl]oxy]methyl]-2,3,3a,9a-tetrahydro-6-oxo-6H-furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-3-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



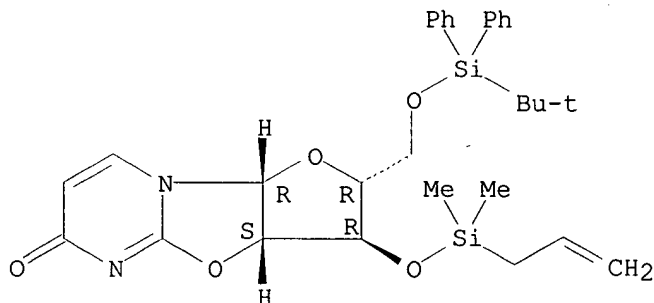
IT 175013-55-5P 175013-56-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of known and novel 2'-modified nucleosides by intramol.  
nucleophilic displacement)

RN 175013-55-5 HCAPLUS

CN 6H-Furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-6-one, 2-[[[(1,1-dimethylethyl)diphenylsilyl]oxy]methyl]-3-[(dimethyl-2-propenylsilyl)oxy]-2,3,3a,9a-tetrahydro-, (2R,3R,3aS,9aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

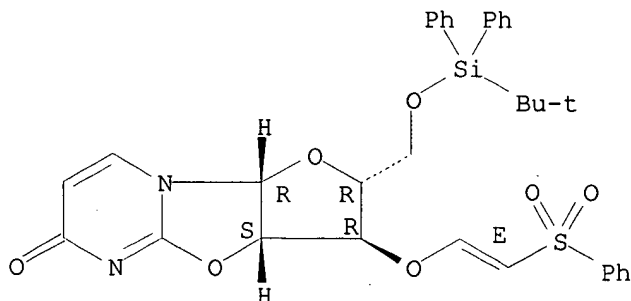


RN 175013-56-6 HCAPLUS

CN 6H-Furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-6-one, 2-[[[(1,1-dimethylethyl)diphenylsilyl]oxy]methyl]-2,3,3a,9a-tetrahydro-3-[[ (1E)-2-(phenylsulfonyl)ethenyl]oxy]-, (2R,3R,3aS,9aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



L101 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2003 ACS

AN 1982:510325 HCAPLUS

DN 97:110325

TI 4-(1,2,4-Triazol-1-yl)- and 4-(3-nitro-1,2,4-triazol-1-yl)-1-(.beta.-D-2,3,5-tri-O-acetyl-arabinofuranosyl)pyrimidin-2(1H)-ones. Valuable intermediates in the synthesis of derivatives of 1-(.beta.-D-arabinofuranosyl)cytosine (ara-C)

AU Divakar, K. J.; Reese, Colin B.

CS Dep. Chem., King's Coll., London, WC2R 2LS, UK

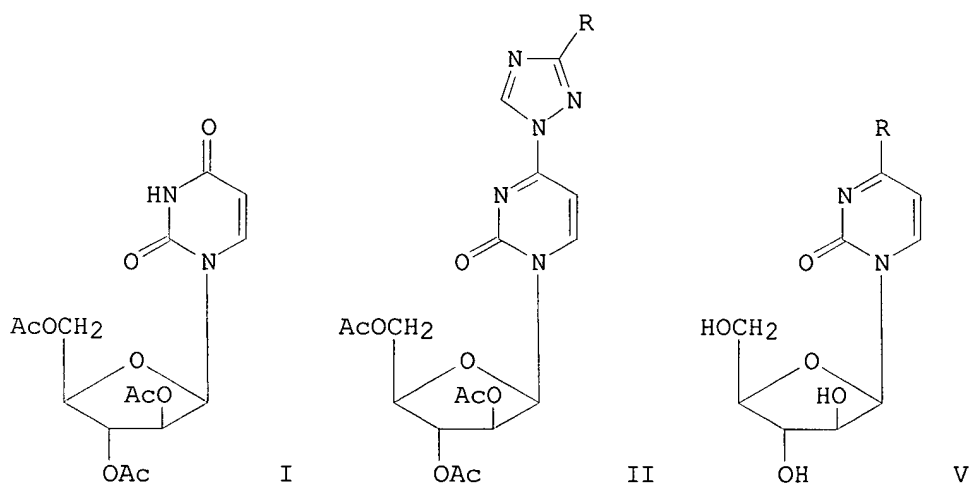
SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1982), (5), 1171-6  
CODEN: JCPRB4; ISSN: 0300-922X

DT Journal

LA English

CC 33-9 (Carbohydrates)  
Section cross-reference(s): 23, 25, 28

GI



AB Condensation reactions of triacetyluracil (I), prepd. in 3 steps from uracil, with tri(1H-1,2,4-triazol-1-yl)phosphine oxide and with 3-nitro-1,2,4-triazole and (PhO)<sub>2</sub>POCl gave the title compds. II (R = H, NO<sub>2</sub>) (III and IV, resp.). Substitution reactions of III with RH (R = NH<sub>2</sub>, NHMe, NMe<sub>2</sub>, morpholino, PhNH, p-MeC<sub>6</sub>H<sub>4</sub>S) gave the corresponding arabinofuranosylcytosines V in high yield. Substitution of IV with PhNH<sub>2</sub> and with H<sub>2</sub>NCH<sub>2</sub>CO<sub>2</sub>Me gave V (R = PhNH, NHCH<sub>2</sub>CO<sub>2</sub>Me, resp.).

ST arabinofuranosyluracil prepn condensation triazole; triazolylarabinofuranosylpyrimidinone prepn substitution; cytosine arabinofuranosyl

IT Nucleosides, preparation  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(arabinofuranosylcytosines, prepn. of, by substitution reactions of triazolyl(triacetyluracil)pyrimidinones with amines)

IT Substitution reaction, nucleophilic  
(of triazolyl(triacetyluracil)pyrimidinones, with amines and with toluenethiol)

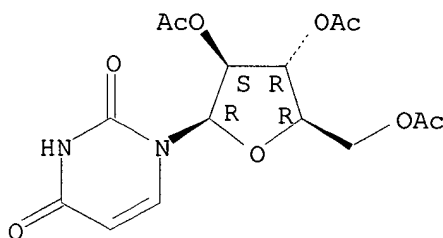
IT 24807-55-4 72741-18-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation reaction of, with (triacetyluracil)uracil)

IT 66-22-8, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(cyclocondensation reaction of, intramol.)

IT 3083-77-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and acetylation of)

- IT **14057-18-2P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and condensation reactions of, with tritriazolylphosphine oxide and nitrotriazole)
- IT **3736-77-4P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and hydrolysis of)
- IT **82855-62-7P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and substitution reactions of, with amines and with toluenethiol)
- IT **82855-63-8P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and substitution reactions of, with aniline and with glycine Me ester)
- IT 147-94-4P 13491-42-4P 82855-64-9P 82855-65-0P 82855-66-1P 82855-67-2P 82855-68-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)
- IT 74-89-5, reactions 106-45-6 110-91-8, reactions 124-40-3, reactions 616-34-2 7664-41-7, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (substitution reaction of, with triazolyl(triacetylarabinofuranosyl)pyrimidinone)
- IT 62-53-3, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (substitution reactions of, with triazolyl(triacetylarabinofuranosyl)pyrimidinones)
- IT **14057-18-2P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and condensation reactions of, with tritriazolylphosphine oxide and nitrotriazole)
- RN 14057-18-2 HCAPLUS  
 CN 2,4(1H,3H)-Pyrimidinedione, 1-(2,3,5-tri-O-acetyl-.beta.-D-arabinofuranosyl)- (9CI) (CA INDEX NAME)

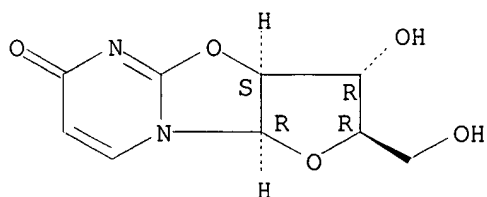
Absolute stereochemistry.



- IT **3736-77-4P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and hydrolysis of)
- RN 3736-77-4 HCAPLUS  
 CN 6H-Furo[2',3':4,5]oxazolo[3,2-a]pyrimidin-6-one, 2,3,3a,9a-tetrahydro-3-hydroxy-2-(hydroxymethyl)-, (2R,3R,3aS,9aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.





IT **82855-62-7P**

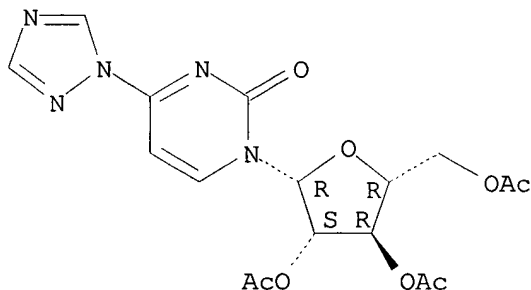
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and substitution reactions of, with amines and with toluenethiol)

RN 82855-62-7 HCAPLUS

CN 2(1H)-Pyrimidinone, 1-(2,3,5-tri-O-acetyl-.beta.-D-arabinofuranosyl)-4-(1H-1,2,4-triazol-1-yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **82855-63-8P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and substitution reactions of, with aniline and with glycine Me ester)

RN 82855-63-8 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-(3-nitro-1H-1,2,4-triazol-1-yl)-1-(2,3,5-tri-O-acetyl-.beta.-D-arabinofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

